GEOGRAPHIC SCHOOL BULLETINS

THE NATIONAL GEOGRAPHIC SOCIETY, WASHINGTON 6, D.C.

TO KNOW THIS WORLD, ITS LIFE . . . VOL. XXXV, NO. 1, OCTOBER 1, 1956

► Suez Canal: World Problem

► Neighboring Mars Pays a Visit

► Statue of Liberty Turns 70

► Colombia

► Singapore (Number 1 in Cities Series)

BEHIND GRAVE FACES, inquiring eyes, Egyptians like men everywhere ponder the danger-laden question: What lies ahead in the Suez Canal crisis? One mulls it on the *hookah*

1

HAMILTON WRIGHT

UMI

under the appalling desert sun, the consul-turned-engineer saw his dream gradually materialize—an almost arrow-straight line of water uniting the twain of East and West. The canal might serve two or three hundred ships a year, he reflected, and promote peace by drawing nations closer together.

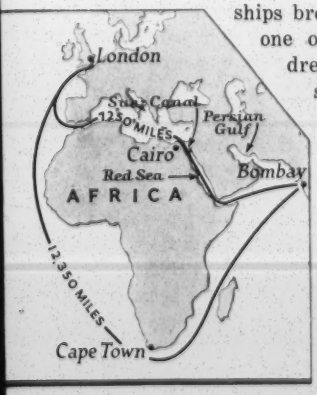
In 1869, the machines clanked their work to completion. Gay celebrations brightened the event. And in November desert winds stiffened the flags of 68 vessels sent by various nations for triumphant procession in the canal. Through the sunlight rode the yacht *L'Aigle*, bearing Empress Eugénie of de Lesseps's homeland.

NATIONAL GEOGRAPHIC SOCIETY MAPS

The Suez Convention of 1888 spelled in French the waterway's ownership—the Compagnie Universelle du Canal Maritime de Suez, "always to be free and open, in time of war as in time of peace, to every vessel of commerce or of war, without distinction of flag." In the normal course of the original agreements, Egypt would take control in 1968.

A hand-gesturing statue of De Lesseps at Port Said on the Mediterranean end overlooks a scene dwarfing the builder's expectations; every few days as many ships pass as he had envisioned in a year. In 1955 a statistics-minded bystander might have counted 14,666 ships, and for the first time in its history more than 100 million metric tons of cargo—five times the traffic of a decade ago. Along the canal, so blended in the desert that ships seem riding waves of sand, move astounding quantities of cotton, textiles, grain, coal, crude oil, and other offerings of East and West.

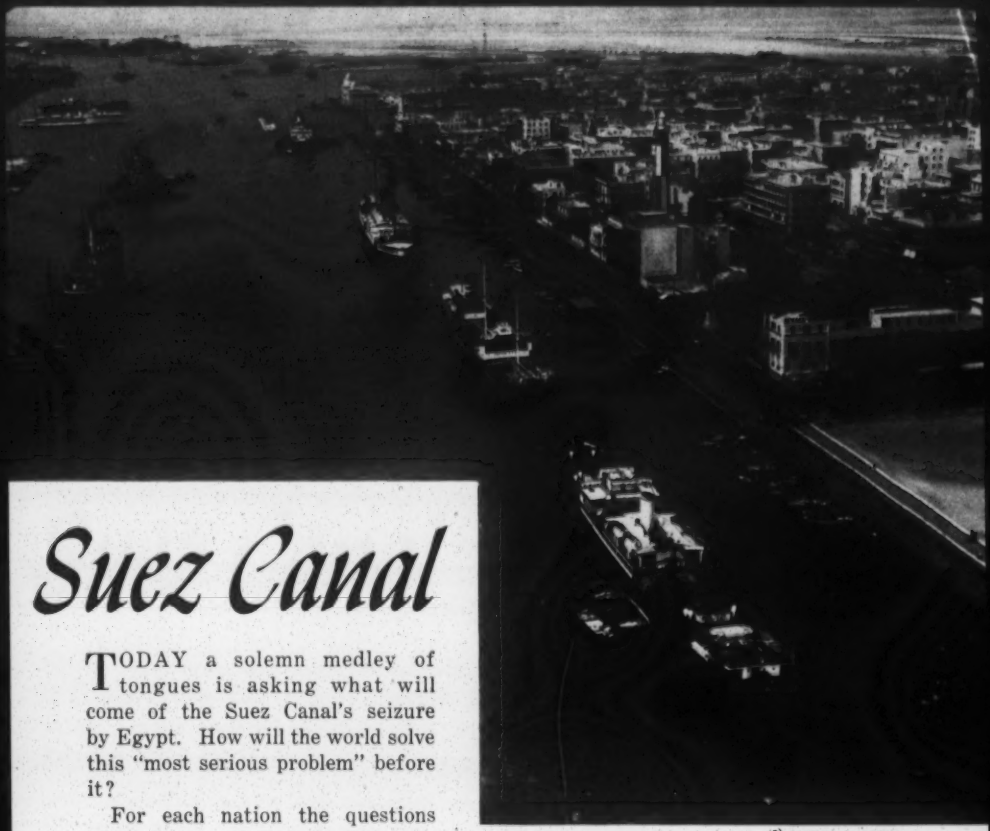
Suez, indeed, like Broadway or the Strand, seldom sleeps. Pilots, workmen, and administrators normally take shifts. Vessels move in both directions around the clock, passing in the wide spots of lakes or in a recently-completed "switch." Ships carrying Royal mail or dangerous cargoes take priority in transit.



For years Suez business has been bursting at the banks. Increased sizes of ships brought demands for a waterway larger than the original one of 72-foot width and 26-foot depth. Now, squealing dredges have widened the canal to nearly 200 feet, taking ships up to 36 feet in draft. The result shows in handsome returns—a net profit of $30.5 million last year. A laden 16,600-ton T-2 tanker toils one way on the canal for a toll of $8,000.

Beyond the realities of economics lies the pleasure thousands have shared in watching the constant Suez parade of vessels—the varied flags of passenger liners, the rust-splotched freighters, the gypsying tramps, homeless and scarred by distant docks. Among the procession, lateen-sailed craft of the East loaf by, their crewmen hopeful of winds but ready to leap ashore and seize tow lines during calms.

UMI



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Suez Canal

TODAY a solemn medley of tongues is asking what will come of the Suez Canal's seizure by Egypt. How will the world solve this "most serious problem" before it?

For each nation the questions strike home. Not one can be completely indifferent. Many are as vitally concerned as if the canal coursed through their own territory.

What, then, makes this 100-mile-long ditch through the faraway desert so important?

First, it connects Mediterranean and Red Seas, eliminating the long trade route around the African capes. Using the canal, London-to-Bombay vessels clip 5,100 miles—a continent's length—from the movement of goods (see map, below). Without the canal, United States oil investors feel the pinch, for huge Middle East oil deposits represent millions of American dollars. In time of war, the sea lanes of Gibraltar and the canal form a veritable lifeline. Furthermore, for Great Britain and France the seizure invades the national pocketbook; the two own 88 per cent of the dispossessed canal company.

An idealist's dream, human sweat, and macaroni fathered the long-needed "Big Ditch." Face about to mid-19th century: In Egypt, French Consular Officer Ferdinand de Lesseps won the boyish friendship of Mohammed Said, rotund heir-apparent of the Ottoman monarch, by smuggling him plates of macaroni to relieve a rigid diet. Later, as Viceroy of Egypt, Mohammed Said listened to the Frenchman's plan of linking the two seas, "to open the earth to all peoples."

The sweat-damp shoulders of legion-like laborers scooped the soil of desert and marsh from 1859 to 1865, when machinery began sharing the load. Working

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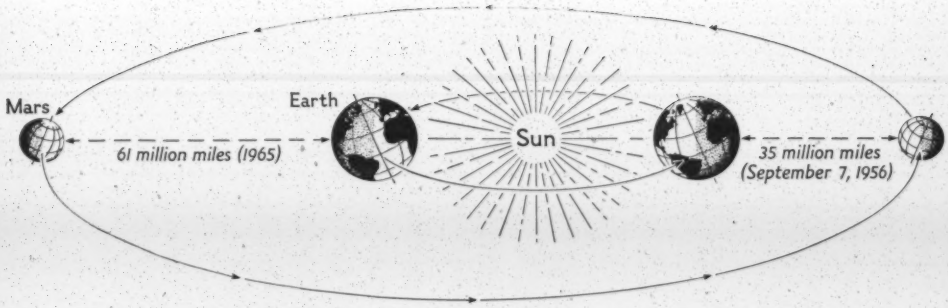

MARS

Like a winking damsel behind the dark windows of the sky, the red-cheeked planet Mars kept its promised date with Earth in September at a bold distance of only 35,120,000 miles.

As the diagram shows, Mars follows a lopsided orbit around the sun. It takes 687 days for each circuit. About every two years, Earth and Mars reach what astronomers call "opposition." That is, the two planets pass in their orbits and momentarily form a straight line with the sun. The distances between them at this time vary from a maximum of more than 60,000,000 miles to a minimum of less than 35,000,000 miles.

Of course it is the close approaches that intrigue astronomers. They occur about every 15 years. The visit just completed in September was the closest since 1924. Telescope addicts will have to wait until 1971 for a similar close-up.

Since scientists can predict this rendezvous of planets, they are able to take full advantage of it. This year, the National Geographic Society and the Lowell Observatory, of Flagstaff, Arizona, studied the spectacle from the clear-skyed vantage point of Bloemfontein, South Africa. For a six-month exploration of the visitor's puzzling canal-striped face, veteran astronomer Dr. E. C. Slipher (right, below) journeyed to Bloemfontein as director of the joint endeavor.

He and his colleagues aimed the University of Michigan's 27-inch refracting telescope from the veritable front-row seat of the Lamont-Hussey Observatory near Bloemfontein. While Mars trembled almost overhead, the scientists snapped thousands of pictures through the lens.

Newly-developed techniques for faster photographs help eliminate the fuzziness of atmospheric movement—the effect that makes stars seem to twinkle.

The planet obliges astronomers in one important way: It is the only member of the solar system whose entire surface may be seen. Unlike the moon, Mars rotates so that all of it becomes visible.

Still, it clings to its secret—whether life exists there. Scientists think it does—but only in the lowest forms of plants.

TERENCE SPENCER, BLACK STAR

Historically, tensions have tormented the Isthmus of Suez like its sun. They were felt when ancient Egyptian, Persian, and Assyrian armies prowled its old caravan roads, are as old as when Joseph was sold into Egyptian bondage, and the Israelites endured 40 years of wandering. Indeed, another Joseph fled into Egypt with Mary and the infant Jesus.

De Lesseps came late with a dream of a canal. Pharaoh's slaves dug into the Isthmus to join the Nile and the Red Sea. Across 22 centuries the ancient watercourse was either rebuilt, traded upon, left to disintegrate, or purposefully destroyed to thwart invaders. The present Sweet Water Canal follows an irrigation ditch dug in Tutankhamen's reign to pour water into Biblical Goshen. T-shaped, it now channels fresh water from the Nile to Suez towns, a necessity since sea brine fouls the four lakes the canal traverses.—S.H.

© FOX FROM GLOBE

KNIFING THROUGH SAND, arrow-straight Suez Canal pierces the desolate isthmus joining Asia and Africa. Here a freighter takes the shortcut, saves miles, time, money

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"To open the earth to all peoples"—Since early times man has pierced stone, cleaved the desert, and turned aside rich soil to open waterways for trade.

Around the 5th century, B.C., diggers began the 850-mile-long Grand Canal of China between Hangchow and Tientsin—oldest now existing. Nebuchadnezzar enhanced his pre-Christian triumphs by building the royal canal of Babylon, joining the Tigris and Euphrates. Surging for empire, Roman stalwarts frequently turned from road to canal building. The thread-like waterways multiplied in Belgium, France, Italy, and Asia as encroaching centuries narrowed men's view of distances while widening their urges for speed.

George Washington wanted canals to help America grow and so fathered the Chesapeake and Ohio waterway to join the east and almost roadless but promising west. Over $7,000,000, an astronomical sum for early America, was risked in the 363-mile-long Erie Canal, connecting the Hudson River with Lake Erie.

Enormous loads burden the Soo Canals joining Lake Huron and Lake Superior. The Soo in season transits more tonnage than Panama and Suez combined, with Manchester and Kiel canals thrown in. But Panama, like Suez, cuts continents apart and captures the imagination. Though about half the length of Suez, Panama ranks as a bigger engineering job.

BEN AND SID ROSS

LIBERTY ISLAND

FOR no other figure in the world, perhaps, have so many throats exclaimed "Look!" or have so many eyes moistened. Now, though young no longer (she turns 70 on October 28th) the goddess-shaped Statue of Liberty still beams her youth-like promise to thousands seeking a new life in America.

However changeless in enormous size and eternal meaning, the 305-foot monument now dominates a renamed site off the tip of Manhattan Island. By a stroke of President Eisenhower's pen Bedloe's Island has become Liberty Island—a more resounding word to men of hope in every land.

Bedloe's Island, which took its name from an early owner, actually has been Liberty Island all along to millions of immigrants.

The upraised lamp, beaming a brilliance 2,500 times the power of full moonlight, is but part of the statue's symbolism. Broken shackles of tyranny lie at the feet of Liberty. The Declaration of Independence is recalled by the inscription, July 4, 1776, on a tablet in the figure's left hand. Planned is a $5,000,000 American Museum of Immigration to honor the foreign-born. It will occupy Miss Liberty's star-pointed base.

Back in the mid-19th century, French historian and commentator Edouard de Laboulaye advanced the idea of the statue as a testimonial to the alliance of France and the United States in the War for American Independence. The young Alsatian sculptor, Frederic Auguste Bartholdi, turned the idea into stone and metal. He planned big. The hands would measure more than 16 feet long; the nose, four feet, six inches; the waist, a girlish 35 feet.

Both nations shared in the enterprise. The French gave the statue and the United States erected the pedestal.

☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆

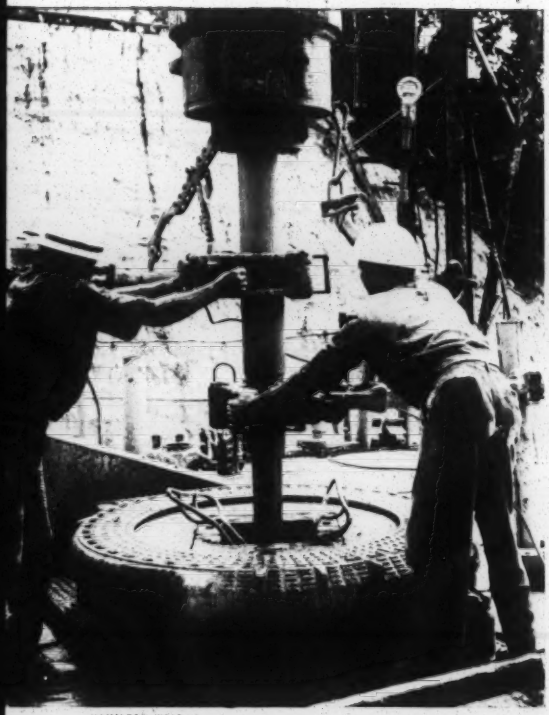
Give me your tired, your poor,
Your huddled masses yearning to breathe free,
The wretched refuse of your teeming shore.
Send these, the homeless, tempest-tost to me.
I lift my lamp beside the golden door!

☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆

The project lent wide excitement to the quiet times. The arm of the statue which holds the torch was exhibited in Philadelphia in 1876 to help dramatize the Centennial Celebration of American Independence. Other throngs marvelled upon it in the same year at Madison Square in New York. Two years later, the head of the statue was displayed in Paris at the World's Fair. The completed work was presented to the United States on July 4, 1884 by the builder of the Suez Canal (page 2).

Laboulaye did not live to see his idea take shape. But Bartholdi held an honored place on October 28, 1886, when President Grover Cleveland dedicated the statue at the gateway to the New World, a symbol of the urge of all mankind for human liberty.—S.H.

DEPT. OF MARINE & AVIATION, N.Y.C.



HAMILTON WRIGHT

OIL RIGGERS drill in the Magdalena Valley. Mineral-rich Colombia tops South America in gold production

on dates, for example, without a chaperone or dueña. I know Mom would go for that. At dances young men ask the chaperone for permission to slide through the next tango with Sally or Carmen. Just going to the movies turns into a big production. An older person always checks the film first to see if it is suitable for girls, then the whole family goes together. Sally says it is such fun to do so many things in the home or as a family group.

Every morning she'd get her eyes open with the help of a little cup of fresh-ground coffee. Colombia grows more coffee than any country except Brazil and sells almost all of it to the United States. But there's enough left over to wake the Republic up in time for breakfast. Mixed with hot milk (café con leche), it's the main dish at breakfast, too, along with hard rolls, and any variety of fruit.

Colombians make up for their light breakfast with a *tremendous* dinner at noon. Sally says you start out with soup made from native vegetables and meat stock, soon find yourself facing a fish baked with onion or garlic, then attack a meat course of guinea hen, perhaps, or freshly killed beef cooked in an exotic sauce. You might have a side dish of rice covered by two fried eggs. Just when you're practically *bursting*, you get a custard type dessert. And of course there's bread in long loaves, and cheese, and jelly from home-grown guavas, and all the fruit you can eat. Sally says you have to watch yourself or you'll get *enormous*.

PAN AMERICAN

After a meal like that, you're fractured; you need a siesta. In Colombia you get one—a two-hour spell when shops are closed and streets stare emptily at the hot sun. Later, young people often go on a swimming party or horseback ride—with chaperones. The Cauca Valley is high enough so it never gets too hot, even though it's only a few degrees north of the Equator. Suppertime comes in the cool of the evening and after it there might be a theatre or concert party (chaperones included) starting about 10.

Sally admits there is more to Colombia than this *mad* vacation whirl at Cali. She and Carmen took trips to other cities. They visited Popayán, the quiet Cauca Valley "city of poets," with ornate churches and Spanish colonial mansions. They drove north to Medellín whose factories and textile mills echo deep in the highlands. They steamed down the tropical Magdalena River in a chuffing stern-wheeler to the booming port of Barranquilla, Colombia's Caribbean gateway.

Hermitage Church at Cali . . .

UMI

Mountain-girt Bogotá

Dear Daddy, Have I told you about Colombia

HONESTLY, ever since Sally got back to college this fall she's been just *impossible* to live with. She insists on wearing a bright colored woollen shawl—she calls it a "ruana"—to classes as well as football games. She and Carmen, her roommate, giggle over Spanish jokes and talk knowingly about bullfighting. And at the drop of a Panama hat they'll swing into the most utterly fantastic Colombian native dances.

You see, Sally spent summer vacation with Carmen's family in Colombia. To hear her tell about it you'd think Colombia was the most absolutely *fabulous* place in South America.

Carmen's father runs a sugar plantation in that Cauca Valley you've read about—the fertile strip where Colombia plans to develop irrigation and hydroelectricity [GEOGRAPHIC SCHOOL BULLETINS, Apr. 18, 1955]. Sally says the Valley runs about 200 miles between perfectly *immense* mountain ranges, with some peaks topping 18,000 feet.

"All kinds of fruits and vegetables grow in Colombia because climate varies with altitude," Sally explains. "Some of the best crops are right in the Valley. Carmen's father showed me sugar cane 15 feet tall."

Carmen's family have a house in Cali which is a sunny little city with sparkling new buildings and shaded promenades, a bustling trade center for the Valley. Sally says all Colombia's highland towns have the flavor of old Spain. People speak pure Castilian, lisping their "s"s, and have traditions and customs that the conquistadores brought with them in the 1530's. The girls never went out

GEORGE W. LONG, NATIONAL GEOGRAPHIC STAFF

A day in . . .

Singapore: *Asian Crossroad*

No. 1 in a series bringing to life a typical day of a distinctive city

WHEN the "Sumatra" struck, early in the morning, De Silva came half awake. Wind-whipped rain sprayed through his window screens, drenching his tiny hotel room, billowing the mosquito netting around his bed. All his life he had been dampened by Singapore's sudden rain squalls. Now, a full-fledged hotel clerk at the age of nineteen, he needed sleep.

Hours later he gazed down at his city, stirring in morning's renewed heat. Nearby rose stone government buildings with a Bank of England look—sturdy, built to last. Below stretched hand-tailored lawns and sweeping boulevards, trademarks of Britain. De Silva knew that behind this facade lay cluttered streets where all peoples of the Orient met, traded, haggled—and somehow rarely intermingled. De Silva felt that his Portuguese descent gave him an objective, if somewhat lonely, view of this city where four out of five people are Chinese.

Morning passed quickly. British officers and civil servants strolled abstractedly through the hotel lobby. Businessmen, some from America, eased into armchairs to scan headlines. Managers of tin mines that dot oval shaped, 220-square-mile Singapore Island dropped in for morning tea. Rubber planters in crisp white suits greeted each other and swapped tales of recent days when terrorists struck at isolated plantations of the Malay Peninsula. Now many communist-inspired jungle raiders, rounded up by police and soldiers, were absorbing an education. Planters were more worried about meeting competition from synthetic rubber than being ambushed. Malaya would be due to achieve independence in August 1957 [GEOGRAPHIC SCHOOL BULLETINS, March 19, 1956]. And Singapore itself was

UMI

HAMILTON WRIGHT

AT BARRANQUILLA, coffee, oil, bananas, platinum swing aboard freighters in exchange for machinery

It seems they learned most about the country at its capital and largest city, Bogotá. Carmen's father told Sally that Bogotá used to be almost inaccessible, perched 8,600 feet high on the eastern mountain ranges. Airlines, highways, and a railroad opened it up. Now modern streets and buildings mix with colonial scenes. Sally says you drive down a broad avenue, lined with really *dreamy* hotels and shops, then make a turn and find yourself squeezing through a cobbled lane between buildings four centuries old, with ornamental balconies jutting out overhead. You honk your way through *hordes* of people—Indians with round felt hats and ponchos, proud ladies in black mantillas hurrying to mass, panting tourists, small boys straddling little burros.

Not far away, famous emerald mines still produce the stones that were dug by ancient Indians and mark Colombia as the world's foremost emerald country. Sally says the salt mines of Zipaquirá impressed her more. Miners have carved it out like a Gothic cathedral with columns and vaulted arches.

Bogotá sits close to the geographical center of the nation. Mountain chains roll past it, running north and south. Eastward lie the lowlands, more than half Colombia's area with only a handful of its estimated 13,500,000 people. Pioneers and Indians live in ranches and scattered villages in grasslands and jungles that stretch to the borders of Venezuela, Brazil, and Peru. Sally says she met western Colombians on their way to settle in this "wild east." The government wants to develop this hinterland, to get at oil and other minerals and cultivate new acres.

Sally heard there were already some 180,000 cattle grazing on range lands in the east. Some areas produce rice and salt as well. And in the jungle territories, Amazonas, Vichada, and Vaupes, there's timber and forest products like cacao, rubber, and resin just waiting for someone to come and get them. It's all a little like those old legends of El Dorado that had those conquistadores simply *frantic*. Only this time the wealth is in natural resources instead of gold dust.

I must say Colombia sounds *terribly* exciting. I can hardly wait for next summer's vacation. That's when Carmen wants *me* to come down and visit her. Okay with you, Daddy?—E.P.

COLOMBIAN EMBASSY

STUCCO WALLS gleam in a hill village where ponchoed Indians tread worn cobbles

WAAGENAAR-PIX

EATING STALLS dot Singapore sidewalks, offering rice, vegetables, Chinese delicacies

looking to the day when it would cease to be a Colony and raise its own flag.

Off duty De Silva often roamed his city, unlike any other in the world. This breathless afternoon he noticed ships from every continent. This magnificent harbor, reaching into shipping lanes half way between India and China, inspired young Sir Stamford Raffles to set up a trading post, with consent of the reigning sultan, in 1819. Since then the city had prospered. Besides vital rubber and tin from Malaya, palm oil, pineapples, copra, rattan, and timber filled cargo ships crowding the free port that Raffles envisioned.

De Silva sniffed blended aromas of incense, Turkish coffee, tea, spices, curry, and bananas, and followed narrow lanes festooned with drying laundry. He passed, it seemed, most of Singapore's estimated 830,000 people—Malayans, Indians, and Pakistanis, Japanese, Arabs in burnooses, Filipinos, above all Chinese.

He walked by a warehouse where Chinese women baled sheets of rubber. He stood aside for Chinese market gardeners trundling vegetables raised in meagre island soil. He watched almond-eyed youngsters at play outside a sleek low-rent apartment built to help house a booming population.

By the time evening's curtain fell, De Silva had noticed a Hindu temple, some Malay shrines, the statue of a Chinese goddess. He had watched Singapore's populace hustling home from work on skittering bicycles, in pedicabs (bicycle-powered rickshaws), in British limousines, and on road-worn sandals. He had seen people at play in gambling halls, brawling amusement parks, and solemnly polite cricket grounds. Here indeed were many cities in one.

Lightning flickered over the strait as he walked home. Again, tonight, the Sumatra would strike. And tomorrow would be another day in Singapore.—E.P.

UMI